



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**CHARLOTTE**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (165 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0056689</b>	MW0056703	MW0056698
Sample Date		Client Info		<b>10 Jan 2024</b>	06 Nov 2023	13 Sep 2023
Machine Age	hrs	Client Info		<b>12125</b>	11674	11247
Oil Age	hrs	Client Info		<b>1380</b>	930	504
Filter Age	hrs	Client Info		<b>690</b>	238	504
Oil Changed		Client Info		<b>Not Chngd</b>	N/A	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>12</b>	9	4
Chromium	ppm	ASTM D5185m	>8	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>3</b>	3	2
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>18	<b>&lt;1</b>	1	0
Copper	ppm	ASTM D5185m	>80	<b>18</b>	15	11
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

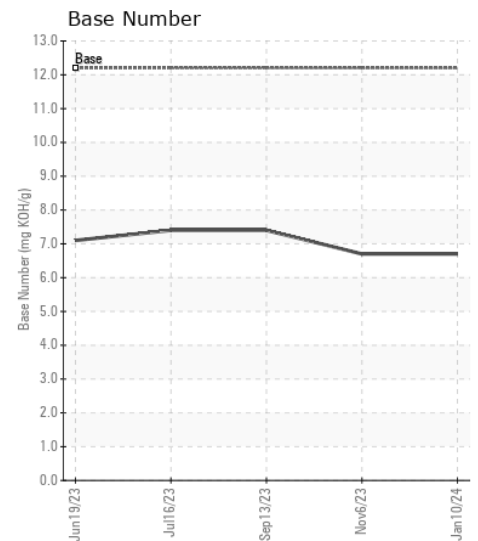
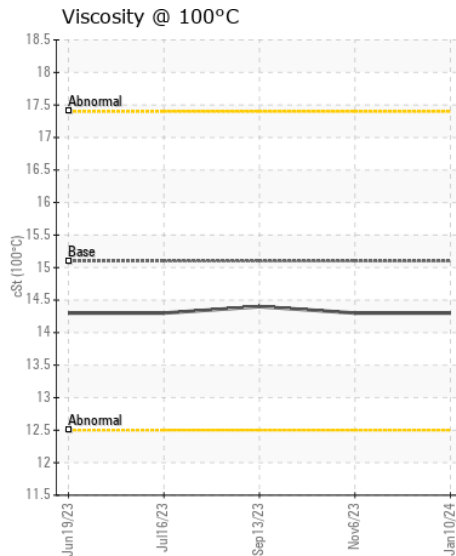
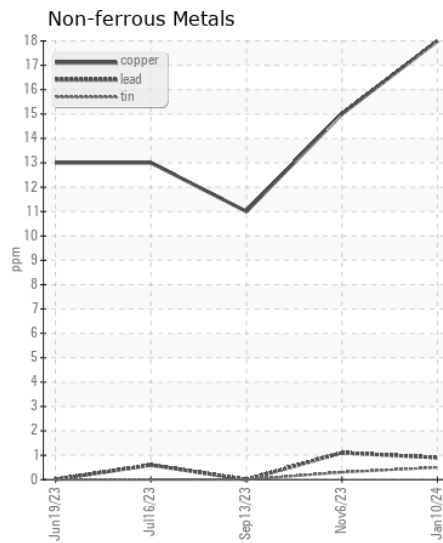
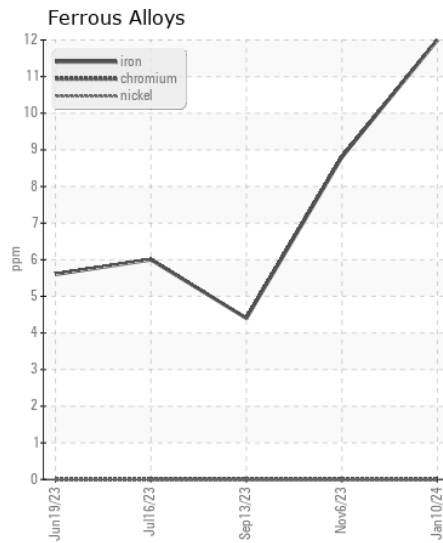
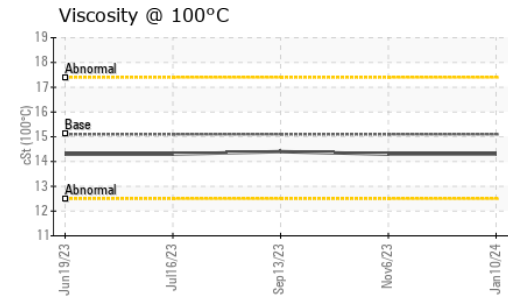
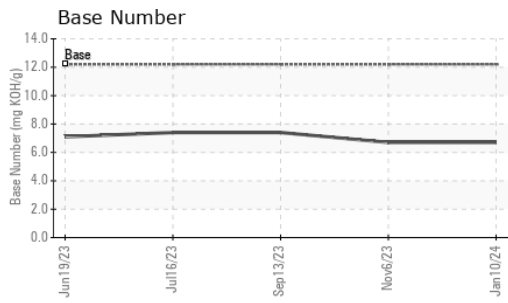
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	2
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	5	3
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.4</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	9.8	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	22.8	21.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>2</b>	2	2
Boron	ppm	ASTM D5185m		<b>131</b>	155	107
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>14</b>	17	9
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>149</b>	136	93
Calcium	ppm	ASTM D5185m		<b>2346</b>	2263	1642
Phosphorus	ppm	ASTM D5185m	1360	<b>919</b>	911	618
Zinc	ppm	ASTM D5185m	1480	<b>1212</b>	1190	795
Sulfur	ppm	ASTM D5185m		<b>3408</b>	3391	2355
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	22.2	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	<b>6.7</b>	6.7	7.4
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.3</b>	14.3	14.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0056689 **Received** : 30 Jan 2024  
**Lab Number** : 06074566 **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10856657 **Diagnostician** : Sean Felton  
**Test Package** : MAR 2

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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